

# A NEW CENTROLENID FROG FROM THE ANDES OF WESTERN COLOMBIA

by

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## Resumen

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Se describe e ilustra una nueva especie de rana del género *Cochranella* propia de las elevaciones intermedias de la Cordillera Occidental de Colombia. La especie se distingue por ser muy oscura en vivo, coloración que pasa a café en etanol. La mayor afinidad la presenta con *C. megacheira*.

## Abstract

A new centrolenid frog (genus *Cochranella*) is named from intermediate elevations of the Cordillera Occidental of Colombia. The new species is distinctive because of its dark color in life and because it is brown in preservative. The species appears most closely allied to *C. megacheira*.

In 1980, Pedro M. Ruiz and I initiated our investigations of the Colombian centrolenid fauna and we encountered a peculiar species on the western slopes of the Cordillera Occidental in Departamento Cauca, Colombia. This small species was dark in color and its nuptial excrescences were obvious. The peculiarity of the species results from its coloration and its proportions but the species appears to rest within what we (Ruiz and Lynch, 1991) recognize as the genus *Cochranella*.

## Materials and Methods

Specimens were measured with dial calipers under a dissecting microscope. Terminology

follows Lynch and Duellman (1973) and Flores (1985). Means are reported  $\pm 1$  standard error.

*Cochranella ruizi* sp. nov.

Fig. 1

**Holotype.** ICNMHN 7469, an adult male, one of a series collected at Quebrada Sopladero, on the lower edge of the Parque Nacional Natural "Munchique", 33 km by road NNW Uribe, Municipio de El Tambo, Departamento del Cauca, Colombia, 2190 m, on 5 August 1980 by *J.D. Lynch*.

**Paratypes.** ICNMHN 7470-71, collected with holotype; ICNMHN 26031-37, 26063, topotypes collected 10-11 October 1990; ICNMHN 26038-40, Quebrada La Torcaza, 25 km NNW Uribe, Parque Nacional Natural "Munchique", Mpio. El Tambo, Depto. Cauca, Colombia, 2520 m; ICNMHN

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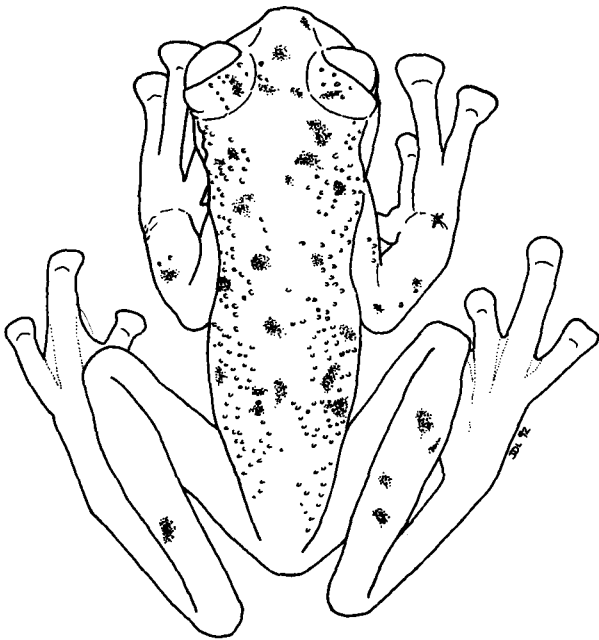


Figure 1. *Cochranella ruizi*, ICNMHN 18180

18180–83, 18185–86 (18185 is cleared and stained skeleton), UVC 7865–68, 10931–32, Campamento Corea, Parque Nacional Natural “Farallones de Cali”, Municipio de Cali, Departamento de Valle del Cauca, Colombia, 2500–2850 m, collected 21–23 January and 26 November 1982 and 12 October 1991; IND–AN 4856–57, casa Corporación Risaralda, Quebrada San Rafael, Parque Nacional Natural Tatamá, 2250, Mpio. de Santuario, Depto. Risaralda, Colombia, collected 7 December 1989; ICNMHN 31345–50, Quebrada Papayala, vereda Los Planes, Mpio. Santuario, Depto. Risaralda, Colombia, 2300–2470 m, collected 11 May 1992.

Referred specimens. ICNMHN 18184, UVC 7864 (Campamento Corea, Depto. Valle del Cauca), UVC 10934–36, Alto Pance (= Campamento Corea), Farallones de Cali, Depto. Valle del Cauca (metamorphosing young); ICNMHN 26041–44 (juveniles, type locality).

**Diagnosis.** (1) vomerine teeth and odontophores absent; (2) bones pale green; (3) parietal peritoneum cream to white, visceral peritoneum clear, pericardium white; (4) color in life black to yellowish olive green with black spots on head, trunk, and limbs; in preservative, dull olive-brown with black spots; (5) fingers not webbed; (6) modal webbing formula for foot I 1 1/2 – 2 II 1 – 2<sup>+</sup> III 1–2 1/3 IV 2 1/2 – 2<sup>-</sup> V; (7) snout truncate in dorsal and lateral views; (8) skin of dorsum smooth except for large spicule-like warts on upper eyelids, side of head, upper flanks, and sometimes limbs in males (rarely in females); (9) no ulnar or tarsal folds; (10) no humeral spine in males; (11) lower 4/5 of tympanum visible, directed posterolaterally; (12) adults medium-sized, 19 males 24.3–26.4

mm, 13 females 23.9–29.5 mm SVL; (13) nuptial excrescence type I.

Only *C. anomala*, *C. balionota*, *C. cochranae*, *C. ignota*, *C. megacheira*, *C. ocellata*, *C. phenax*, *C. pluvialis*, *C. siren*, and *C. truebae* lack vomerine odontophores and have little or no webbing of the hand. Of these, only *C. megacheira* has a pattern of dark spots (ocelli are present in *C. anomala*, *C. cochranae*, *C. ignota*, and *C. ocellata*). *Cochranella ruizi* differs from *C. megacheira* in being olive-brown in alcohol (not lavender). Apparently, *C. ruizi* lacks pigment A (Starret and Savage, 1973) as does *C. anomala* and *C. ignota*. *Cochranella ruizi* also differs from *C. megacheira* in having more extensive webbing of the foot, in being smaller, and in having spicule-like warts rather than rounded tubercles on the dorsum. Each species has large hands.

**Description.** Head as wide as body; snout truncate in dorsal view; no internarial depression; snout truncate in lateral profile, deep; nostrils directed laterally; loreal region concave; eyes large, directed anterolaterally; supratympanic fold barely obscures upper edge of tympanum; tympanum round to higher than long, directed posterolaterally; no vomerine odontophores or teeth; choanae large, round, not concealed by palatal shelf of maxillary arch; tongue round, posterior edge not adherent to floor of mouth, slightly indented; long vocal slits posterolateral to tongue in males.

Forearm larger in males than in females; no ulnar folds or tubercles; hands large, length of hand (base of palmar callus to tip of finger III) 33–35% SVL; first finger equal in length (or slightly longer than) to second; elongate thenar callus, oval palmar callus; supernumerary palmar tubercles round, not elevated; basal webbing between III and IV; thickened cutaneous ridges along lateral edges of fingers; all fingers with large discs, discs round bearing ventral pads (broader than long); males with large white nuptial pad (type I) on top of thumb.

No tarsal folds or tubercles; inner metatarsal tubercle oval; no outer metatarsal or plantar supernumerary tubercles; basal subarticular tubercles elongate on IV and V, other subarticular tubercles round, non-conical; discs of toes slightly smaller than those of fingers, round; toe webbing (formula following Myers and Duellman, 1982): I (1 1/3 – 2<sup>-</sup>) – (2<sup>+</sup> – 2<sup>-</sup>) II (1 – 1 1/3) – (2<sup>+</sup> – 2) III (1 – 1 1/2) – (2 – 2 1/2) IV (2 1/3 – 2 3/4) – (1 3/4 – 2<sup>-</sup>) V.

Skin of dorsum smooth except that males (and sometimes females) have spicule-like warts on upper eyelid and along upper flanks (Fig. 1); some males are spiculate over all dorsal surfaces of body (including face) and upper surface of shank and forearm; throat smooth, venter coarsely areolate; pair of large flat warts on ventral surface of thighs at midline; anal opening at upper level of thighs.

Melanophores over all dorsal surfaces, on posterior surfaces of thighs, ventral surfaces of hands and feet, and along edge of chin; most individuals have pattern of distinct darker spots on dorsal surfaces; in preservative, color is dull olive-brown.

Color in life. Dorsum black to dark olive green to yellowish olive green to pale olive with black spots on head, trunk, and limbs; edge of lower jaw brown; venter and inner fingers (I–II) cream to pale yellow; subanal warts white; iris cooper (or metallic reddish-yellow) with black (or bronze) reticulation and horizontal black stripe; parietal peritoneum cream to white; visceral peritoneum colorless; bones pale green; heart not visible; eggs black (fieldnotes, P. M. Ruiz, 10–11 October 1990).

Natural history. The first collection of this species was made in a clump of vegetation growing at the base of (and in the spray-zone for) a waterfall on Quebrada Sopladero at the lower boundary of the Parque Nacional Natural de Munchique. Three males were obtained while I was searching for a *Hyla sarampiona* that was calling in the vegetation. On 10–11 October 1990, Pedro Ruiz secured several individuals along that stream and another six km away. The frogs were perched on leaves and moss, primarily within the spray-zones of small waterfalls (10 cm – 1 m away from water). An amplexant pair (ICNMHN 26038–39) was found on a leaf one meter above the ground on a plant about one meter from the Quebrada Torcaza. Juveniles were dispersed in the same microhabitat as the adults.

Specimens from Risaralda appear to be larger than those from Cauca and Valle del Cauca. Five Risaralda males are 25.7–26.4 mm SVL ( $\bar{x}$  = 25.9) and three Risaralda females are 27.0–29.5 mm SVL ( $\bar{x}$  = 28.2) in contrast to 14 southern males

(24.3–26.4 mm SVL,  $\bar{x}$  = 25.5 ± 0.2) and 10 southern females (23.9–27.1 mm SVL,  $\bar{x}$  = 26.1 ± 0.3).

Distribution. Intermediate elevations (2190–2850 m) on the western slopes of the Cordillera Occidental (and the eastern slope of the Farallones de Cali) in Cauca, Risaralda, and Valle del Cauca.

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